Clinical Section

Recent Advances in the Treatment of Hypertension

STEPHEN B. THORSON, M.D.

In spite of many striking advances in the study of experimental hypertension and its relationship to clinical "essential" hypertension, this disease is still the most serious medical problem of middle adult life. That it is a common and serious disease is shown by morbidity and mortality figures of the Metropolitan Life Insurance Company. These statistics show that at the age of 40, 3 out of every 10 males and 2 out of every 10 females have high blood pressure. Every other death over the age of 50 is due to cardio-vascular-renal disease. Over one-fourth of the deaths over the age of 50 are due to hypertension. In 1930, 450,000 Americans died of cardio-vascular-renal disease. In 1940 this figure had risen to 600,000. More than half of these numbers died of hypertension. These statistics are subject, of course, to the usual critical analysis of insurance figures in general.

In the past many medical men have argued that it was inadvisable to reduce the blood pressure of hypertensive individuals. This is not true. A reduction in arterial tension is highly desirable and all attempts to secure such results should be made. During the early stages of essential hypertension it is generally conceded that a diffuse vaso-spasm exists. This increased peripheral resistance over a prolonged period of time eventually produces generalized vascular sclerosis. When this has occurred the treatment becomes increasingly difficult and the prognosis more grave.

The fact that a multitude of drugs have been recommended for the treatment of hypertension indicates that as yet we have no ideal therapeutic agent. It must be remembered that spontaneous remissions occur, especially in the early vaso-spastic phase. The blood pressure in normal individuals is very labile and in hypertension is even more so. Any therapy which is used must therefore reduce the blood pressure for a prolonged period of time before it can be considered to be effective. This is true of both medical and surgical treatment.

Of all our present methods of treatment adequate rest and mental ease are the most effective. Since hypertension tends to occur in patients of high tension type all treatment should be directed towards the reduction of this tendency. All hypertensives should get at least 9 hours of rest each night, together with an hour of complete physical and mental rest during the day. Often a change of occupation may be of value particularly in those individuals working under continual nervous strain. Frequent visits to the physician are of value because they give the doctor an opportunity to allay the all too frequent apprehension which interferes with mental ease and maintains the blood pressure at high level.

Phenobarbital and Sulfocyanates

Of all the numerous drugs that have been used there are only two types which have proven their worth: the sedatives and the sulfocyanates. The most desirable sedative is one which reduces nervousness and irritability without depressing the vital cerebral functions. The drug which meets these requirements best is phenobarbital.

When sulfocyanate therapy was first introduced at the turn of the century it was thought to be the answer to the problem. However, it fell into disuse because of distressing toxic reactions. In 1924, Westphal revived interest in the drug and since then it has been used more extensively. The sulphocyanates are usually given in the form of the potassium salt. The outstanding feature of its use seems to be the striking relief of symptoms. This is especially true of the most distressing of all hypertensive symptoms—headache. However, in only about 50% of cases is there any appreciable reduction of the vascular tension. Certainly any drug which relieves the annoying symptoms is worthy of trial provided it has no dangerous side effects. The dosage varies considerably in different individuals and it has been shown that frequent estimations of the cyanate level in the blood are essential if adequate dosage is to be obtained and toxic symptoms avoided. The optimum level lies between 8 and 14 mgms.%. Some patients can be maintained between these levels on 5 grs. a day and others may require as much as 5 grs. three times a day. The drug should never be used for any length of time without frequent blood determinations. Other drugs such as purine derivatives, the nitrites and iodides have been used extensively but the results have not been encouraging.

Diets of various types have been advised. There is, however, no diet which will alter the level of the blood pressure. Obesity is always a dangerous state associated with hypertension. It is essential that these patients should reduce. It is well to advise hypertensives: "You watch your weight and I'll watch your blood pressure." The added weight of the excess fat increases the strain on the circulation and there may be fatty infiltration into the cardiac musculature with further embarrassment to an already heavily taxed muscle.

Sympathectomy

That surgery has a definite place in the field of hypertension is well recognized especially in many of the secondary hypertensive states. If it is admitted that hypertension is the result of a general increase in the peripheral resistance it seems reasonable to consider separation of the vascular bed from its sympathetic nerve thereby reducing general vaso-constriction. Unfortunately in humans this is not feasible.

The most important feature of the surgical treatment of hypertension is the proper selection of cases. Before a patient can be considered as a candidate for sympathectomy he should be hospitalized for hourly blood pressure readings for a 24-hour period. The reduction of the blood pressure following the administration of sodium amytal, sodium nitrate, pentothal sodium, and spinal and rectal avertin anaesthesia should be observed. If the drop in tension is striking, surgery may be indicated. Numerous procedures have been recommended but they all have the same object mind, *i.e.,* separation of a large area of the vascular system from its sympathetic nerve supply. The procedure used at the Mayo Clinic at the present time consists of a section of the splanchnic nerves, removal of the coeliac ganglion and the upper lumbar sympathetic trunk including the 1st and 2nd lumbar ganglia. This is done by the subdiaphragmatic extraperitoneal route. This results in an increase in splanchnic reservoir, denervation of the adrenals and supposedly increases the blood supply to the kidney. Crile, Peet and Smithwick have each described a surgical method with much to recommend them. The procedure of Smithwick is more radical and has gained much favour in many centres.

The results of sympathectomy on permanent reduction of the blood pressure are disappointing. Many hypertensives show a temporary reduction following any surgical procedure in which a general anaesthetic is used. It must be admitted, however, that surgery has produced a striking alleviation of symptoms in some instances.

Experimental Studies

Much of what has been presented above is not new. It represents a general summary of our present-day methods and in many instances they vary little from our management of this problem 20 years ago. Recently a number of experimental studies have been carried out which are beginning to throw light on the etiology of essential hypertension. It may be that through these studies we may soon acquire a rational effective method of treating hypertension.

From the time of Bright's classical work on glomerulonephritis in 1836 until 1914, it was generally felt that hypertension was due to pathology in the kidney. In 1915 a number of workers, led by Janeway and Albutt, began to question this contention and suggested that hypertension might exist without demonstrable renal lesions. After 20 years of struggling to liberate ourselves from the renal origin of hypertension we were led right back to this concept by the brilliant work of Goldblatt which began to appear in the literature about 1934.

Goldblatt's Clamp

He was able to produce a chronic persistent hypertension in dogs by means of a specially devised silver clamp which fitted about the renal artery. By adjusting the clamp the constriction of the artery could be varied in degree and duration. The renal ischemia produced by this means was shown to result in a chronic persistent hypertension which appeared to be very similar to that observed in humans with "essential" hypertension. It was known that if both kidneys were removed no hypertension occurred. If slight constriction of both renal arteries was made a moderate hypertension resulted. If the constriction was unilateral no hypertension or at most a slight temporary elevation occurred. Increasing constriction produced increasing hypertension and eventually severe hypertension with renal failure could be obtained. With severe constriction a clinical picture resembling malignant hypertension could be produced. Finally, if both arteries were completely constricted no hypertension occurred. By means of a series of destructive operations on the sympathetic nervous system Goldblatt was able to show that there was no neurogenic factor involved. From this work he concluded that there was some renal humoral factor involved in the development of ischemic renal hypertension in experimental animals.

Shortly after this Irvine Page of the Lilly Laboratory was able to produce hypertension of chronic and persistent type in dogs by enclosing kidneys in silk or cellophane bags which produced a thick, firm, fibrous shell about the kidney. This shell exerted an even diffuse pressure over the entire renal parenchyma. His results were much the same as those of Goldblatt. The more severe the compression the more severe the hypertension became, finally terminating in impairment of renal function. From a long series of experiments he concluded that hypertension was probably the result of reduction of pulse pressure within the glomerulous. He also concluded that the actual site of the disease was the efferent glomerular arteriole.

Renin and Angiotonin

As long ago as 1898 Tigerstedt and Bergmann had isolated a pressor substance from normal kidneys. They named this substance renin. They were able to raise the blood pressure of nephrectomized animals with this substance. Little interest was taken in renin until Page revived it. He believes that renin is produced in excessive amounts in the ischemic kidney.

He has substantiated this experimentally. This substance is returned to the general circulation via the renal vein and exerts its effect on the general vascular bed. By means of another series of experiments he has shown that a substance present in normal blood plasma is necessary to activate this renin. The reaction between renin and renin-activator produces a strong pressor substance which he has named angiotonin. Page has injected this substance into nephrectomized animals and into animals with intact kidneys and the rise in blood pressure was much greater in the nephrectomized group which led Page to believe that the normal kidney produces an inhibitor substance to this pressor system. Normal blood pressure is thus a balance between the pressors and the inhibitor.

Kidney Extract Treatment

With this theory in mind Page has recently prepared an extract from normal hog kidneys with which he has been able to control hypertension in dogs and in some human cases. The extract is given parenterally and in 2 to 4 days a marked drop in blood pressure occurs. The rate of fall depends on the amount of extract given. The pressure remains low for several days after cessation of injection and then slowly rises again to hypertensive levels. Once the pressure has been lowered it can be maintained at the reduced level with small maintenance doses of extract. All the human cases have done well. Even in the malignant syndrome the blood pressure has been markedly reduced, the cardiac enlargement has decreased, the renal function has improved and the retinal exudates, haemorrhages and papilledema have cleared strikingly. There has been marked improvement in symptoms. In the earlier extracts toxic reactions occurred but newer extracts have contained fewer impurities and fewer toxic manifestations have been observed. Harrison has prepared a similar extract for oral use and reports similar impressive results.

There is still much argument as to whether experimental renal ischemic hypertension of Page and Goldblatt is the same as essential hypertension in man. There are at least 50 known conditions associated with an elevation of the blood pressure and it seems reasonable to assume that there is no one single cause of so-called essential hypertension. The results of these extracts have not been followed for a sufficient period of time to evaluate their usefulness but preliminary reports suggest that Page is on the right track. The cost and difficulty of producing the extracts have been a bar to wider use. Perhaps the time is not far off when a synthetic will be available for more widespread experimental study. Recently, Schroeder of the Rockefeller Institute has used the enzyme tyrosinase with striking results in the treatment of hypertension in experimental animals and a few humans. Unfortunately severe toxic reactions have been observed.

Surgical Kidney

As a result of this surgical work, the recent literature has shown increasing interest in the kidney in cases of hypertension. There are numerous articles on the relationship of the surgical kidney to hypertension. A recent publication by Braasch suggests that not more than 1% of unilateral surgical lesions of the kidney have resulted in reduction in the blood pressure following removal of the diseased kidney. There is an increasing trend to study cases of essential hypertension more fully especially with excretory urograms. It is felt that eventually it may be possible to select the cases with unilateral surgical lesions of the kidney in association with hypertension which will derive benefit from nephrectomy. One author has suggested that kidneys with intrarenal pelves are more potentially liable to develop hypertension than those kidneys with extra-renal pelves. The matter is still quite undecided and bears much further study before any definite plan of treatment can be formulated in those cases in which hypertension is associated with a surgical lesion of one kidney, notably atrophic unilateral pyelonephritis.

Another recent study deserves little more than passing interest. A group of Cuban workers have reported encouraging results in the treatment of hypertension with massive doses of Vitamin A. Experiments in dogs suggest that some of the animals have improved by daily injections of 200,000 to 400,000 units of Vitamin A in sesame oil. No extensive studies have been made but it seems to be the general consensus of opinion that this method of treatment will prove to be unsatisfactory.

The last 10 years have brought many advances in our knowledge of experimental hypertension. Shortly it may be possible to use this knowledge in the field of clinical hypertension. Victory over this dread disease may be near at hand. The highest awards in Medicine most surely await the winner.

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Editorials and Association Notes

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Beveridge---On Social Security in Canada

The following material is selected from "Minutes of Proceedings and Evidence" as given before the Special Committee on Social Security by Sir William Beveridge, on Tuesday, May 25th, 1943:

All good things can be got for a price, but nothing can be got without a price; and I believe that the price of making a worthy new Britain probably is the same as it would be in Canada. There are two things that are necessary. First, we must be prepared to look ahead. In Britain one of our darling vices in the past has been that we did not like to look ahead; we trusted to muddling through. I hope now we have learned that you cannot do that with advantage. You do not do well in war if you have made no preparation for war; I think we have now come to realize that you cannot do well in peace if you have made no preparation for peace during war. Every war government—in your country, in my own country, and in all the countries of the United Nations—has two jobs: that of conducting the war to victory, and that at the same time of making plans and deciding on plans during the war for what is to happen when victory comes. We hear people saying: Let us win the war, and think about peace afterwards. That may be all right for people of my age. It is, I am sure, not what the young people who are doing the fighting will want, or will stand. I see streams of young men. They come through my hands at Oxford, many of them on the way here to train for the air force. They are ready to do all that is needed for victory. There is no question about that. But they are not thinking about victory as an end. They are interested in what is to happen afterwards. And we have to make plans for what is going to happen after, now.

The second part of the price for maintaining employment after the war is that there must be more international collaboration after the war than there was before it. That is one field. Obviously there must be international collaboration in preserving the peace after this war and the preventing of future wars. No one country can do that for itself. That can only be done by collaboration.

Another thing that no one country can do for itself is to maintain employment. That does not depend upon the way in which you organize your own industries. You can organize your industries in one way and the people of Britain can organize theirs in another way; and in the same way the people of the United States can organize theirs in another way, and the people of Russia can organize theirs in another way, and so on. However we organize it, all our industries will be affected by what is done by international trade. There must be consultation about international trade, about economic policy and trade policy between the different United Nations.

So that I would end by submitting three propositions: First, maintenance by social insurance of a minimum income to keep people out of want is vital, and in a sense the bed rock of all social reconstruction after the war, but it is only one element and it should be regarded only as one element in our programme. We must attack want, disease, ignorance, squalor and idleness; all of these, and not one only.

The second proposition is that plans for doing this must be made now and not left for consideration until after the war.

The third proposition is that the plans must be made in some essential things like consultation between the United Nations now, and in collaboration between them.

Those are the three propositions which I would submit to you. I submit them to you with great hopefulness. I know how much thought you are giving to this problem of social security in relation to other problems after the war. You are looking at the problem as a whole. You are clearly looking at problems now and are not waiting until after the war. Finally, you have been good enough to invite me to come and speak to you of my suggestions. To me that indicates

that you realize the importance and the necessity of international collaboration. Therefore I speak to you with hopefulness.

Would Sir William Beveridge explain the difference between social insurance as proposed in the Beveridge report and the Marsh report and social security as it is being administered in New Zealand at the present time? Which does he consider the most stable particularly with regard to financing?

Sir William Beveridge: I shall make the comparison first with New Zealand. New Zealand, under the Act of 1939, I think it is, has the most comprehensive scheme of social security in the world. I am not clear about Russia, and I shall leave Russia out for the moment, because they have a different economic system. Of any community with an economic system like Britain's New Zealand's scheme of security is much the most comprehensive; they are doing now practically all the things that I propose in this report. They have covered them pretty well as completely. The one important difference—of course there are a lot of minor differences—but the one important difference is in the method of financing. In New Zealand the whole of the security is financed by a special income tax. That is to say, there is not a uniform contribution, there is no single flat contribution for everybody; everybody pays according to his capacity. I propose financing through a tripartite scheme of payments by the insured persons themselves through a tax on their wages, by the employer through a tax on his payroll, and by the state; and roughly my proposal is that one-quarter is to be conributed by the insured person, one-quarter by the employer and one-half by the state. Some people have asked: since you are going to have a compulsory tax why not do it all by income tax as in New Zealand? Why have a fixed contribution from everybody irrespective of his means? Does that not mean that the poor man is paying a larger proportion of his income for social security than the rich man? My answer is: that I am quite certain that that is what the people of Britain want. It adds to their sense of self respect to make a contribution irrespective of means. I do not believe that the people of Britain would have thanked me with anything like the same enthusiasm for a purely non-contributory scheme. None of the bodies representing the main bodies of British opinion, the ordinary insured person, the trade unions, or the friendly societies proposes abolition of the contribution.

Let me add another reason for having a fixed contribution. If you have everything simply coming from the state, apart from the fact that it looks like giving people everything for nothing, you set up a pressure simply to increase benefits irrespective of contributions. If nobody is paying contributions at all, everybody is going to ask for more and more benefits, and the taxpayer will find that out. If you have a system under which more or less a fixed proportion, say, one-quarter is raised in contributions, people will realize that they cannot get unlimited benefits without paying for them; and I believe that is an element of sound finance. In the last resort, there is not so much difference between my system and the New Zealand system as might appear; because although with my fixed contribution every man, whether his wages are £3 or £6 or £10 a week, pays the same insurance conribution, nearly every one pays also as a tax-payer. The £6 a week man or the £10 a week man or the £20 a week man pays more as a tax-payer, and we are nearly all taxpayers. But I do think it is a good plan to have a fixed contribution as well as taxation. That is the main difference between the British scheme and the New Zealand scheme.

There is another difference, and in this respect I think frankly that the British scheme is better than the New Zealand scheme, and it is this: in nearly all the New Zealand benefits there is some kind of means test—it is not a very stringent one, but to some extent there is a means test—and I do not think that is good. They do not apply that to pensions but they do apply it to sickness and unemployment benefits, and I think that is a pity.

Now, I come to the Marsh report. That is very much like my scheme. I do not know whether it is going to suit you; you must argue that out for yourselves, but if you should adopt it I should be delighted, because I should see that you had a scheme very like our own scheme.

There are two main differences, and they are these: firstly, in place of a fixed flat rate of benefits and a flat contribution for everybody, irrespective of earnings, it is proposed by Dr. Marsh that you should have different rates of benefits and contributions, at any rate for all the employment risks such as unemployment and sickness, though not for pensions. In Britain our population is so homogeneous and we are so industrialized; even agriculture has become so and is getting up so near to the wages of indusry that we can, I think, have a flat contribution and a flat benefit. As you know, I am proposing for a man and wife something like 40 shillings a week as subsistence in unemployment, in pension and in sickness, and that applies to everybody, and I am suggesting a flat contribution of 4s. 3d. a week for the adult man in employment and a different rate for women, but there is no difference according to earnings.

Now, Dr. Marsh's report proposes a continuation of what you have in unemployment insurance, a graduated scheme of benefits and contributions related to earnings. There may be a very good reason for that, and it is not for me to advise you; but so far as I can judge there is a very good reason for that difference. You probably have greater differences in stan-

dards of living in this country than we have in Britain, and it is good, therefore, to have that variation.

Another difference between Dr. Marsh's report and mine relates to workmen's compensation for industrial accident and disease. In Britain our present scheme is that the employer is individually liable and is left to insure against his risks commercially; that is not a good system; practically everybody in Britain wants to change it. In changing it I am proposing to make it a social service part of the general social insurance. You have now a different system from ours; Dr. Marsh says that it has worked well, and on the whole he assumes that it should not be changed.

I think those are the main differences between the two reports. Far more important are the points of similarity. Each of us proposes a comprehensive scheme covering all risks. Each proposes to give pensions not simply for becoming 65 years of age as at present but only on condition of retirement and to increase the pension if retirement is postponed. You are proposing to have universal medical treatment and children's allowances. If you do all this you will have not a copy of the British scheme, but the Canadian counterpart of the British scheme. Each proposes pensions at a flat rate for all, enough for subsistence.

Mr. Turgeon: The second question of our committee is by Mr. Castleden and is as follows: "Is it possible for private industry, as we know it, to provide a sufficiently high level of employment necessary for social security of the people? If not, what in your opinion is the alternative?"

Sir William Beveridge: This is looking for the last page of the book of which I have written as yet only the first page: on how one can maintain employment. It is not impossible for private industry to maintain a sufficiently high level of employment. I should say that if we could get back to the levels of unemployment that we had before the first world war it would be possible. That was done by private industry. The unemployment that we had in Britain before the first world war was not more than could have been covered thoroughly by unemployment insurance. When we introduced unemployment insurance in Britain in 1913-1914 we calculated that a benefit of not more than fifteen weeks would cover all but about 5 per cent of the total unemployment. These were golden days. If we could only get back to them, and if private industry could get us back to them, then I do not think you need more unemployment insurance for the unemployment that remains. So it is not impossible for private industry to maintain a sufficiently high level of employment. But if you ask me whether private industry is likely to be able to do this in future, my answer is not so clear. Frankly I am not very hopeful that private industry will by itself get us back to that, but I do not want to give a definite answer. I am only exploring, myself, how much private industry can do and how much the state must come in to help private industry to-day.

Labour Views on Health Insurance

The Trades and Labor Congress of Canada gave the following as part of their submission to the Special Committee on Social Security in Ottawa in May:

The Trades and Labour Congress of Canada on whose behalf we appear is an organization representing fifty-eight international unions with 1,518 Canadian locals; ten national unions with 164 locals; three provincial federations of labour; forty-one Trades and Labour councils situated in the various cities throughout this dominion; 124 directly chartered and affiliated federal unions; representing a total of 1,849 local unions with a combined membership of 264,375. This Trades and Labour Congress of Canada was organized in the city of Toronto on the 26th day of December, 1883, and for almost sixty years has been seeking and securing legislation of benefit to the workers and the citizens of Canada and for the last twenty-five years has consistently been pressing for a scheme of national health insurance.

As stated, we have asked for a national scheme. Our reasons for this request is in conformity with our general desire for uniform legislation throughout Canada. The need for uniformity becomes even greater in a scheme for health insurance framed to improve the health of the people. It is quite apparent that if some provinces introduced health insurance plans for their citizens, while others did not, the movement of people from one province to another would tend to break down the health standards that the other provinces had established.

As Canadians we desire the maximum health standards for all citizens in Canada. We understand the dominion government has taken this matter under advisement, but recognizing that provincial governments are reluctant to surrender control over fields of activity now recognized as being within their jurisdiction, the dominion government has taken the alternative of rendering assistance to the provincial governments for the setting up of health insurance providing the provinces conform to certain standards. In view of this, we concur in the principles contained in the proposed Dominion Act of making dominion grants-in-aid to the provinces for Public Health Insurance Acts.

Before leaving this, however, we would like to point out that with unemployment insurance in effect, there is need for a closer tie-up between unemployment insurance benefits and sick benefits. We think that any scheme of health insurance should include cash benefits to take care of the time lost on account of illness and we do see difficulty in such provision being included in the present bill.

We are fully in accord with the principle of complete coverage as outlined. Organized labour is heartily in favour of medical care being available to all citizens, men, women and children, in the community, and approves the effort made in this direction in the draft bill.

We are in accord with the medical, dental, pharmaceutical, hospital and nursing benefits as outlined but would *suggest that chiropractic treatment also be given recognition in the bill.*

Regarding section 16, covering the establishment of the personnel of the National Council on Health Insurance, *we could not possibly agree with the provision that is made for the preponderance of representation of the medical practitioners together with the representation from labour in a minority category,* in spite of the fact that they represent the largest body of contributors and as the group providing a substantial portion of the funds, we would certainly insist on having far more control in the administration and the spending of the money than we would have under such a suggested board.

Organized labour itself, has, of course, at all times asked for representation on all boards. We are naturally prepared to concede to the medical profession the right to representation but we could not possibly agree to them having entire control. In our opinion those who provide the funds, namely, the government, employees and employers, should control the national council in the matter of representation.

Labour needs to be assured that the primary purpose of a Health Insurance Act is to operate for the benefit of the contributors and not entirely in the interests of the medical profession.

Second schedule, section 4, in the draft bill for a provincial Health Insurance Act: in dealing with this, we must point out that no information is contained in the proposed bill as to what amount the contributions from labour would be, and so it is impossible for us to commit ourselves on this question, as one can hardly state that they are in favour or against, without knowing the actual cost.

We desire to have the collection system clearly set out so as to know just how much the workers at different rates of wages will be required to contribute for themselves and how much for their dependents; how much the employers will contribute and how much the provincial and dominion governments will contribute. This information is not contained in the draft bill.

In addition we desire to know the general distribution of the cost. That is, what percentage of the total cost would be paid by the employees, what percentage by the employers, and what percentage by the provincial and dominion governments, and again, until such time as we have this information, it is absolutely impossible to express an opinion.

Hospital Benefit, section 31 (1) (*i*) which reads as follows:

> "That any qualified person in receipt of treatment as aforesaid, except as described in paragraph (*b*) of this subsection shall be *available for clinical observation by the teaching staff of medical schools, etc.*"

This we could not possibly agree to. A scheme of health insurance on a contributory basis does not mean that one in receipt of benefits automatically becomes a guinea pig for observation. This is a matter for the patient to decide. The inclusion of such provision in our opinion shows a wrong attitude and wrong approach to the whole idea of health insurance.

Section 35 (2), Administration by Commission: This requires that the chairman of the provincial health insurance commission shall be a doctor of medicine. Here again we find efforts being made, in view of the fact that the chairman of the commission is the one member of the commission on a full time basis, to place the entire control of the Act in the hands of the medical association and we cannot agree with this.

Section 35 (paragraph 4) shows how the other members of the provincial commission shall be determined for appointment, and again we find the contributors' position inferior so far as representation is concerned, the emphasis being placed on representation from the professions. We would want considerably stronger representation from labour than is now suggested.

Section 40 (2) relative to the filling of positions requiring professional training and experience: While many sections of organized labour have advocated the advantages of closed shop agreements, we are of the

opinion that this is carrying the principle a little too far and is a little lop-sided in view of all the circumstances because no similar provision is made for consultations with representative organizations of employees relative to the employment of their membership outside of those in the professions enumerated.

In part 3 of schedule (*c*) in which is required an itemized return giving information regarding personnel, livestock, implements, tools and equipment, ships, boats, nets, etc, household furniture, library, mortgages, bonds, stocks and other investments, cash on hand and on deposit, amounts receivable, surrender value of insurance policies and all other personal property together with a statement of amount owing. Frankly, we don't understand the need of this. If it is a health insurance scheme on a contributory basis, then we think the contributor is entitled to receive the benefits without any need of such an investigation.

We are forced to the opinion that the proposed provincial bill is, in effect, a complete closed shop agreement between the governments and the union of medical practitioners, not only covering the employment and salaries to be arranged by them, but full autonomy in hiring and firing, including administration, and all that it implies in giving full discretion to the membership of the medical association in the giving or withholding of benefits to the citizens who are providing the funds. Frankly, we cannot agree.

In conclusion we would respectfully recommend that in this regard the Act be entirely reconstituted to take control away from the medical profession and place it in the hands of the contributors. We earnestly desire that health insurance be inaugurated as early as possible, but it is important that any measure that might be enacted must primarily be framed so that the first consideration is given to protecting the interests of the great mass of those whose health it is designed to protect, and that the interests of others who are to be employed to render the necessary services under the Act must be of secondary importance.

By Mr. Wright:

Q. Mr. Bengough, under the proposed Act it is left to the provinces to state whether there shall be a maximum over which the people will not benefit; is it the opinion of the labour congress that that is good? —A. No, we are not in favour of a ceiling on the amount of salaries. Frankly, we believe that all citizens should be included in the health insurance scheme.

By Mr. Wood:

Q. With regard to the last paragraph, ". . . we would respectfully recommend that in this regard the Act be entirely reconstituted to take control away from the medical profession and place it in the hands of the contributors . . ." would the union of agricultural implement workers be prepared to vest in the farmers, the users of their implements, the same right to control their union?—A. Well, it is hardly the same. After all, the union or implement makers would not be dealing with the farmers, they would be dealing with the employers, and they would ask for representation, but they would not ask for the entire management of the concern, and so there is a difference. In this case the employees are asking for the entire management.

Mr. Maybank: I think the employers ought to get some show.

By Mr. Howden:

Q. I would like to ask the witness whether he agrees with anything in this bill at all?—A. Yes, we have stated that we do. We agree with the principle of the dominion government making a grant in aid of the provinces; we agree with the coverage as set out, which are the main parts of the bill; we agree with the benefits that are to be—the inclusion of what is set out in the bill: so we would agree with the whole of it—the whole principle of it; the only thing that we take exception to is the management.

By Mr. Kinley:

Q. Do you agree to joint contribution?—A. Certainly we agree to joint contribution; we think it should be on a three-way basis; that is government, employers, and employees.

By Hon. Mr. Bruce:

Q. I would like to ask the witness if he seriously thinks this Act is being operated for the benefit of the medical profession?—A. Not yet, it is not, doctor, but if it was operated on this basis I would be rather afraid it would be.

Q. Do you think this Act could be operated at all without the medical profession?—A. Well, naturally their services are needed.

Personal Notes and Social News

Dr. Sidney Larson, "29" has been appointed Assistant Professor in Radiology at University of Rochester, N.Y. He is also on the staff of the Strong Memorial Hospital in the department of Radiology.

◈ ◈

Flight Lieut. and Mrs. J. Stewart McKenty are celebrating the birth of a daughter on June 4th, 1943, at the Winnipeg General Hospital.

◈ ◈

Surgeon-Lieutenant Quentin D. Jacks, R.C.N.V.R., and Mrs. Jacks, who spent the last few weeks visiting friends in Winnipeg, have returned to the East Coast.

◈ ◈

Dr. Robert Beamish, son of Mr. and Mrs. W. H. Beamish of Shoal Lake, Man., was married Saturday, June 26th, to Mary Kathleen, daughter of Mrs. A. S. Weeks, of Victoria, B.C.

◈ ◈

Dr. and Mrs. E. D. Hudson, of Hamiota, Man., announce the marriage on June 26th, of their eldest daughter, Flora Mabel, to LAC. Charles J. Long, R.C.A.F., only son of Mrs. J. Long and the late Mr. Long, of Gladstone, Man.

◈ ◈

The following medical officers have left for A22 Canadian Army Medical Corps Training Centre, Camp Borden, Ont., where they will take courses to qualify for promotion: Major J. L. Downey, Lieuts. Avard I. Fryer, Alan N. Brinsmead, Clair F. Benoit, George A. Waugh, Carberry, Man.; John H. Martin, formerly of Neepawa, Man., and Arthur C. Stevenson.

◈ ◈

Dr. Murray Ross Hodgson, son of Mr. and Mrs. W. Hodgson of Underhill, Man., was married on June 26th, 1943, to Phyllis Elizabeth, only daughter of Mr. and Mrs. J. A. Button of Herschel, Sask.

◈ ◈

Surg. Lieut. R. S. Swan, R.C.N.V.R., son of Dr. and Mrs. Rennie R. Swan of Winnipeg, was married in New York City, June 19th, to Frances Maud Ferguson, younger daughter of the late Rev. and Mrs. James T. Ferguson of Calgary, Alta.

Lieut. Robert George Winram, R.C.A.M.C., son of Dr. and Mrs. Alexander Winram of Winnipeg, was united in marriage on June 26th to Maria Cecelia, daughter of Mrs. Theodore Kipp and the late Mr. Kipp of Winnipeg.

◈ ◈

Surg. Lieut. G. P. Fahrni, D.S.C., R.C.N.V.R., son of Lt.-Col. G. S. Fahrni of Winnipeg, has been promoted to Acting Surgeon Lieutenant Commander.

◈ ◈

Lieut. Edward Leighton Redpath, R.C.A.M.C., son of Mr. and Mrs. C. Redpath of Souris, Man., was married May 31st, 1943 at Westminster United Church, to Lois Gwendolyn, youngest daughter of Mrs. George Wellwood.

◈ ◈

Dr. Arthur R. Taylor, chief medical officer of Deer Lodge Hospital, who is retiring July 5 after holding the position for 24 years, was presented with an easy chair and an inscribed walking cane by members of the hospital staff.

◈ ◈

Dr. A. Marguerite Swan of Winnipeg, was created a Member of the Order of the British Empire by His Majesty King George VI., when she was included in the list of honours bestowed upon Canadians, in commemoration of his recent birthday.

◈ ◈

Dr. and Mrs. K. C. Johnston announce the birth of a son (Kenneth Cameron) on June 20th, 1943, at St. Boniface Hospital.

◈ ◈

Surg. Lieut. A. J. C. McCallum, R.C.N.V.R., son of Mrs. A. J. C. McCallum and the late Mr. McCallum, was married June 30th, 1943, to Marie, younger daughter of Mr. and Mrs. Joseph I. Brittain of Winnipeg.

◈ ◈

Captain and Mrs. John D. Leishman announce the birth of a son (John Arnot David), on June 14th, 1943 at Horsham Hospital, in Sussex, England.

◈ ◈

Surgeon-Lieut. Edgar M. Gee, R.C.N.V.R., is spending leave with his parents, Mr. and Mrs. Fred. M. Gee.

Department of Health and Public Welfare

Comparisons Communicable Diseases—Manitoba

(Whites Only)

DISEASES	1943 April 25 to May 22	1943 March 28 to April 24	1942 April 23 to May 20	1942 March 26 to April 22	TOTALS Jan. 1 to May 22,'43	TOTALS Jan. 1 to May 20,'42
Anterior Poliomyelitis	1	....	3	2	9	10
Chickenpox	140	132	130	119	820	1184
Diphtheria	**24**	**22**	17	18	129	84
Diphtheria Carriers	2	2	1	....	11	5
Dysentery—Amoebic	....	1	....	....	2	....
Dysentery—Bacillary	....	....	1	4	2	5
Erysipelas	5	3	6	13	27	42
Encephalitis	1	....	....	....	3	2
Influenza	31	27	5	15	306	171
Measles	430	446	627	796	1416	3514
Measles—German	48	15	26	29	76	218
Meningococcal Meningitis	....	8	1	2	17	12
Mumps	367	507	368	443	2462	2256
Ophthalmia Neonatorum	....	....	....	....	....	1
Pneumonia—Lobar	4	18	13	15	87	65
Puerperal Fever	....	....	....	1	1	2
Scarlet Fever	168	148	128	192	609	797
Septic Sore Throat	1	5	2	5	20	53
Smallpox	....	....	....	....	....	....
Tetanus	....	....	....	....	....	1
Trachoma	....	....	2	....	2	3
Tuberculosis	66	45	51	38	264	184
Typhoid Fever	3	3	....	2	12	6
Typhoid Paratyphoid	....	....	1	....	....	1
Typhoid Carriers	....	1	....	....	1	1
Undulant Fever	....	....	1	....	2	4
Whooping Cough	259	308	12	11	1095	94
Gonorrhoea	**156**	**141**	96	91	808	464
Gonorrhoea	**46**	**37**	71	47	212	304
Syphilis	....	....	....	....	6	....

DIPHTHERIA—Manitoba with 24 cases had 9 more cases than Ontario, Saskatchewan, Minnesota and North Dakota combined. This is not an enviable record.

VENEREAL DISEASE—Gonorrhoea—Fifteen more cases and Syphilis—nine more cases than for the preceding four-week period.

INFANTILE DIARRHOEA—Since the middle of April and up to June the sixth—there have been, in Greater Winnipeg, 41 deaths from this cause. During the preceding three and one-half months of the year there were only three. The very large majority of these deaths have occurred in institutions. A high degree of infectiousness seems to be evident. Up to the end of April, 11 deaths from this cause were reported from other parts of the Province. The attack rate is hard to determine—the mortality rate about 50 per cent. This condition is not confined to Manitoba and is occupying the attention of Hospital Administrators and Public Health Departments elsewhere, as well as here. It is to be hoped that a solution to this problem will be found at a very early date.

POLIOMYELITIS

Experimental evidence shows that a considerable percentage of adults have antibodies to the virus of poliomyelitis in their blood although they may never have shown or been aware of any symptoms of the disease. This fact particularly applies to areas that have been subject to epidemics of poliomyelitis. Manitoba has had a number of these epidemics. The intramuscular administration of whole blood from any adult, but preferably one who previously has had poliomyelitis, to a person in the early stage of the disease might be considered if the physician believes that such a procedure has therapeutic value.

DEATHS FROM COMMUNICABLE DISEASE
April, 1943

URBAN—Cancer 42, Pneumonia (other forms) 15, Pneumonia Lobar 6,Tuberculosis 8, Whooping Cough 5, Diphtheria 4, Syphilis 4, Influenza 1, Lethargic Encephalitis 1, Septicemia 1, Dysentery 1, Disease of Skin 1. Other deaths under 1 year 32. Other deaths over 1 year 189. Stillbirths 20. Total 330.

RURAL—Cancer 18, Tuberculosis 18, Pneumonia (other forms) 17, Pneumonia Lobar 2, Measles 1, Syphilis 1, Cerebrospinal Meningitis 1, Septicemia 1. Other deaths under 1 year 32. Other deaths over 1 year 165. Stillbirths 14. Total 283.

INDIANS—Pneumonia (other forms) 5, Influenza 4, Tuberculosis 4, Whooping Cough 3, Pneumonia Lobar 2. Other deaths under 1 year 3. Other deaths over 1 year 4. Stillbirths 3. Total 28.

DISEASE	Manitoba Apr. 25-May 22 *737,935	Ontario Apr. 25-May 22 *3,824,734	Saskatchewan Apr. 25-May 22 *905,974	Minnesota Apr. 25-May 22 *2,792,300	North Dakota Apr. 25-May 22 *641,935
Anterior Poliomyelitis	1	....	....	....	....
Meningococcal Meningitis	....	16	....	14	2
Chickenpox	140	1043	89	382	....
Diphtheria	**24**	**4**	**1**	**7**	**3**
Erysipelas	5	6	4	5	2
Influenza	31	288	9	6	61
Encephalitis	1	....	....	....	....
Measles	430	7267	617	1527	455
German Measles	48	453	36	....	....
Mumps	367	3619	225	....	62
Lobar Pneumonia	4	....	....	....	....
Scarlet Fever	168	1198	101	236	24
Septic Sore Throat	1	....	....	....	....
Trachoma	....	....	....	....	5
Tuberculosis	66	250	30	66	23
Typhoid Fever	3	2	....	2	1
Typhoid, Para-Typhoid	....	1	....	....	....
Undulant Fever	....	4	....	....	....
Whooping Cough	259	579	63	363	25
Dysentery, Amoebic	....	....	....	4	....
Dysentery, Bacillary	....	....	3	....	1
Diphtheria Carrier	2	....	....	....	....
Gonorrhoea	**156**	**488**	....	....	**12**
Syphilis	**49**	**591**	....	....	**21**

*Approximate Populations.